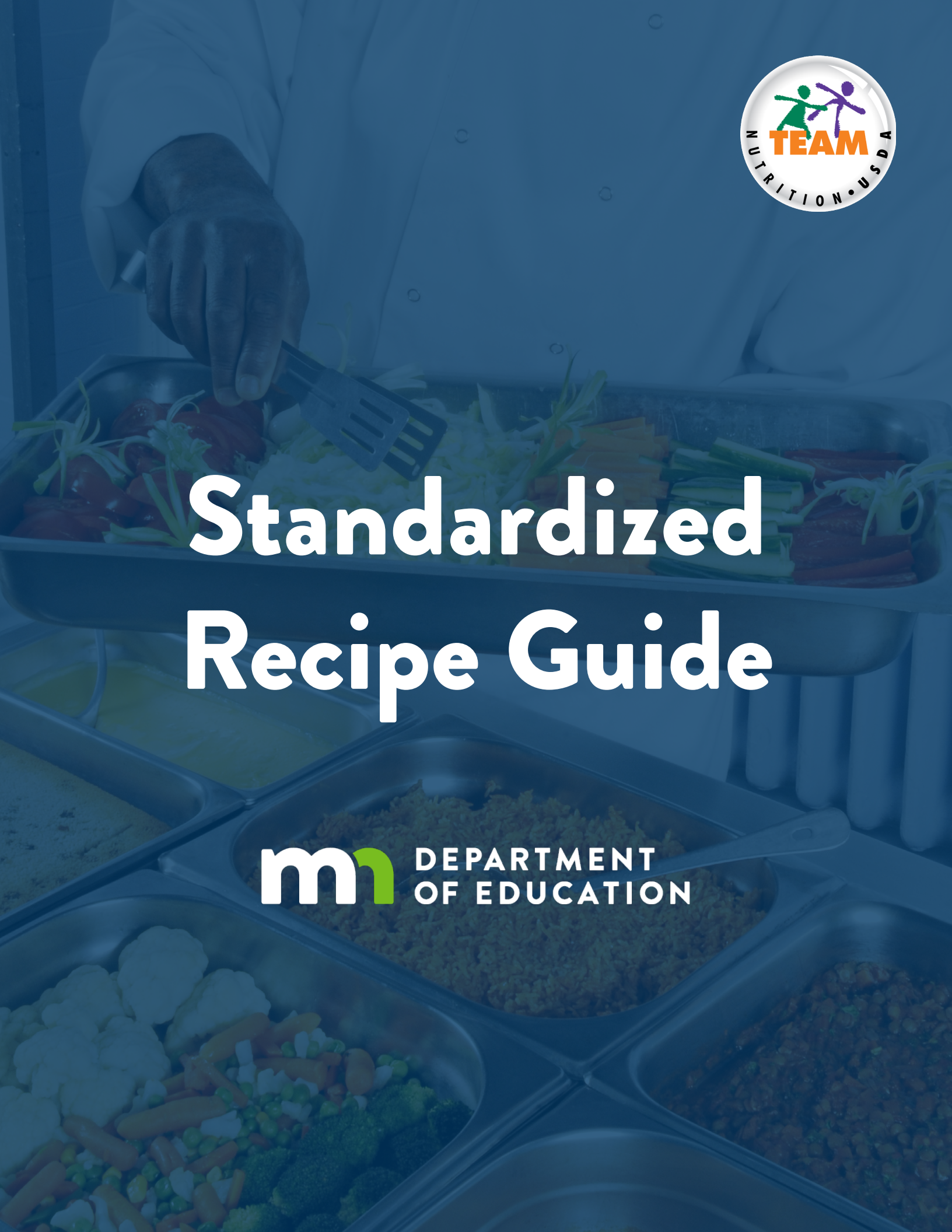

Standardized Recipe Guide

DEPARTMENT OF EDUCATION

Table of Contents

Standardized Recipe Basics

What is a standardized recipe?

The definition of a standardized recipe is one that, "has been tried, adapted, and retried several times for use by a given foodservice operation and has been found to produce the same good results and yield every time when the exact procedures are used with the same type of equipment and the same quantity and quality of ingredients," according to the U.S. Department of Agriculture (USDA).

A quantity recipe is not necessarily a standardized recipe. A recipe that produces 25 servings or more is called a quantity recipe. Quantity recipes are considered standardized when they have been adapted to an individual school foodservice operation using the method described above.

When do we need to have a standardized recipe?

Any menu item that contains two or more ingredients must have a standardized recipe. This includes both cold and hot items. For example, sandwiches, salads, entrees, and side dishes all need a written recipe.

Benefits

There are many benefits to using standardized recipes, including:

- **Quality:** ensures that food items provide consistent high-quality menu items that have been thoroughly tested and evaluated.
- **Predictable Portions and Yield**: accurately predict the number of portions from each recipe and clearly define serving size or utensil. Eliminates large amounts of leftovers or needing to find alternate options because too little was prepared.
- **Cost Control (food and labor):** better use of labor time; purchasing and storage is more efficient because the exact amount of ingredients is specified. If serving sizes are portioned inaccurately that can lead to cost overruns which will add up significantly over time.
- **Customer satisfaction:** providing consistency with ingredients, preparation and presentation can result in increased customer satisfaction.
- **Consistent nutrient content and crediting:** the nutritional and crediting information of a menu item are valid and consistent. Both can be significantly altered when a recipe is not followed.
- **Efficient purchasing:** the quantity of food needed is calculated from the information on each recipe.
- **Inventory control:** provides predictable information for your food inventory that will be used each time the recipe is produced.
- **Employee confidence:** eliminates guesswork, decreases the chances of producing poor food and prevents shortages of servings.

The USDA Standardized Recipes from the Child Nutrition Recipe Box are a great resource. The recipes are standardized for school meals and are widely used across the country.

Elements of a Standardized Recipe

Standardized recipes for school foodservice operations should contain certain elements. You may use the standardized recipe template, located on the Minnesota Department of Education (MDE) Menu Documentation webpage. Below is an example of a USDA Standardized Recipe from the Child Nutrition Recipe Box.

1. Recipe Name (also include a recipe number) – these will be recorded on your Food Production Record
2. Meal component contribution

Seasonal Fruit and Yogurt Parfaits - USDA Recipe for Schools

1

This seasonal sensation of fresh fruit and creamy yogurt topped off with crunchy granola is a sweet treat any time of day.

NSLP/SBP CREDITING INFORMATION One parfait provides 1 oz equivalent meat alternate, ½ cup fruit, and 0.5 oz equivalent grains.

2

3. Ingredients – list by form (canned, frozen, etc.) and any pre-preparation needed (diced, shredded, etc.)
4. Total weight and/or volume of each ingredient needed for the number of servings the recipe yields.

50 Servings		100 Servings
INGREDIENTS	Quantity	
	Weight	Measure
*Fresh strawberries, sliced	6 lb 4 oz	1 gal 2 qt 1 cup
Low-fat yogurt, plain	12 lb 8 oz	1 gal 2 qt 1 cup
Vanilla extract	1 Tbsp 1 tsp	1 Tbsp 1 tsp
Honey	½ cup	½ cup
Variations:	**Variations:**	**Variations:**
Variation 1: *Fresh blueberries	8 lb 4 oz	1 gal 2 qt 3½ cups
OR	OR	OR
Variation 2: Canned peaches, drained	10 lb 8 oz	1 gal 3 cups 3 Tbsp (approx. 1½ No. 10 cans)

3

4

5. Detailed directions of how to prepare the recipe, including cooking time and temperatures
6. Portion size/serving utensil
7. Food Safety Information (Hazard Analysis Critical Control Point (HACCP) Information)

INSTRUCTIONS

5

1. See Granola USDA Recipe for CACFP for recipe ingredients and directions.
2. Set granola aside for step 7.
3. Place 25 clear, plastic cups (9 oz each) on a sheet pan (18" x 26" x 1").

   For 50 servings, use 2 pans. For 100 servings, use 4 pans.
4. Place ½ cup (about 2 oz) strawberries in each cup.
5. Combine yogurt, vanilla, and honey in a large bowl. Stir well.
6. Using a No. 8 scoop, portion ½ cup (about 4 oz) yogurt mixture on top of strawberries.

6

7. Sprinkle ⅛ cup (about 0.5 oz) granola over yogurt.

   Critical Control Point: Hold at 41°F or below.

7

8. Serve 1 parfait.
9. Variation 1: Replace strawberries with blueberries in step 4.

   OR

   Variation 2: Replace strawberries with peaches in step 4.

8. Nutrient analysis (total calories, saturated fat, and sodium per portion size) –this is optional to include, but recommended
9. Recipe yield/volume

NUTRITION INFORMATION

8

Nutrition Facts

Seasonal Fruit and Yogurt Parfaits USDA Recipe for Schools

Amount Per Serving (1 parfait)	
Calories 252	
	% Daily Value*
Total Fat 4g	**6%**
Cholesterol 7mg	**2%**
Sodium 150mg	**7%**
Total Carbohydrates 44g	**15%**
Dietary Fiber 4g	**17%**
Total Sugars 29g	**32%**
Protein 10g	**20%**
Potassium 104mg	**3%**
Vitamin D 0IU	**0%**
Calcium 221mg	**22%**
Iron 1mg	**6%**

* *The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Marketing Guide 50 Servings :	**Marketing Guide 100 Servings :**
Strawberries 7 lb 2 oz	Strawberries 14 lb 4 oz

Notes

*See Marketing Guide for purchasing information on foods that will change during preparation or when a variation of the ingredients is available.

Cooking Process #2: Same Day Service.

9

Yield / Volume 50 Servings :	**Yield / Volume 100 Servings :**
About 18 lb 8 oz About 2 gal 1 qt 1 cup/50 parfaits	About 37 lb 8 oz About 4 gal 2 qt 2 cup/100 parfaits

Abbreviations commonly used in Standardized Recipes

As purchased	AP
Critical Control Point	CCP
Cup	C
Edible portion	EP
Fluid Ounce	fl oz
Gallon	gal
Gram	g
Kilogram	kg
Number	No. or #
Ounce	oz
Ounce equivalent	oz eq
Package	pkg
Pint	pt
Pound	lb
Quart	qt
Tablespoon	Tbsp.
Teaspoon	tsp

Converting Fractions to Decimals

1/8	= 0.125
1/4	= 0.250
1/3	= 0.333
3/8	= 0.375
1/2	= 0.500
5/8	= 0.625
2/3	= 0.666
3/4	= 0.750
7/8	= 0.875

The Basics at a Glance posters from the Institute for Child Nutrition also contain references to common school food service tools and measurements:

- Recipe Equivalents, Volume Equivalents, and Weight Equivalents (Basics at a Glance)
- Scoop, Spoon, and Ladle sizes (Basics at a Glance)
- Fraction to Decimal Equivalents and Metric Equivalents by Weight (Basics at a Glance)
- Pan Sizes and Cutting Diagrams (Basics at a Glance)

Crediting Information for Standardized Recipes

Crediting a recipe means you determine how one portion of that recipe contributes toward the meal pattern components, such as 2 ounce equivalent of meat/meat alternate or 1/2 cup of starchy vegetable. A standardized recipe should include:

- The *total* volume and/or weight that the prepared recipe yields. This value is not needed to credit the recipe; however, check that the crediting, portion size, number of portions and total yield are mathematically feasible.
- The serving size for a *single* portion (for each age/grade group). The recipe will be credited for each portion size that is served.

Important Crediting Resources

Resource	Purpose	How to Use
The Food Buying Guide (FBG)	The FBG helps you: calculate the amount of each ingredient you need as purchased to yield an edible portion; purchase food (non-convenience type items) in the most cost-effective manner; and determine the specific contribution each food makes toward the meal pattern requirements.	Access the Food Buying Guide (FBG) Interactive Tool or Downloadable Food Buying Guide. The Recipe Analysis Workbook (RAW) is a tool contained in the FBG that is used to determine meal pattern contributions and crediting of a recipe.
Grain Crediting Chart for Child Nutrition Programs	Helps determine ounce equivalents of various grain items.	Refer to MDE's Grain Crediting Chart for Child Nutrition Programs See the Calculating Ounce Equivalents section of the USDA Whole Grain Resource for crediting examples.
Child Nutrition (CN) Labels	Available for main dish entrees that contribute to the meat/meat alternate component of the meal pattern. Some commercially prepared, combination foods may not have a CN label because it is a voluntary program for manufacturers.	See MDE's Labels and Menu Documentation Tip sheet for more information.
Manufacturer's Product Formulation Statement (PFS)	Provides crediting information for commercially prepared products that do not have a CN Label.	See MDE's Labels and Menu Documentation Tip sheet for more information.
USDA Product Information Sheets	Provides crediting and yield information, along with other product details, for USDA Foods.	View USDA Product Information Sheets to search for specific products by category.

Calculating Meal Pattern Contributions

The Food Buying Guide for Child Nutrition Programs (FBG) has a tool called the Recipe Analysis Workbook (RAW) which will help you determine your recipe's meal pattern contributions. The Recipe Analysis Workbook is available in two different formats:

- Through the Food Buying Guide (FBG) Interactive Tool (you must create an account)
- As a spreadsheet, upon request to the Child Nutrition Program - Nutrition and Technical Assistance Branch (CNP-NTAB) mailbox at cnpntab@fns.usda.gov

Save a copy of the RAW for each recipe you calculate. Information you need to complete the RAW includes:

- Ingredients that contribute to the meal pattern components
- Correct weight and volume of each ingredient
- Serving size
- Servings per recipe

Instructions on using the RAW:

- Food Buying Guide (FBG) Interactive Tool: Create an account or log in > Select the Help tab > Select Training Video > Select **Chapter 3B Recipe Analysis Workbook**. Video is 10:31 minutes.
- Appendix A: Recipe Analysis Workbook of the Downloadable Food Buying Guide

Crediting example

Beef Macaroni Casserole
Yield = 50 servings
Ingredients:

5 lbs. raw beef, ground (80/20)
1/2 Tbsp. salt
1/2 tsp. pepper
1/2 c. onion, chopped
1 #10 can tomatoes
1/2 c. green pepper
3 lbs. macaroni

How many ounces of Meat/Meat Alternate does one serving of this recipe provide?

The recipe has 5 lbs. of raw ground beef.

1. Use the FBG to determine the how much ground beef you will have after it is cooked. The FBG states that 1 lb. 80/20 raw ground beef (As Purchased) yields .74 lb. cooked, drained meat (Edible Portion)
2. Cross multiply to determine the number of pounds of beef the cooked recipe will yield:

$$\frac{1 \text{ lb.}}{.74 \text{ lb.}} = \frac{5 \text{ lbs.}}{X} \qquad X = 3.7 \text{ lbs.}$$

3. Convert this to ounces (16 oz. = 1 lb.):

3.7 lbs. x 16 oz. = 59.2 oz.

4. Determine how many ounces are in one serving:

   59.2 oz. ÷ 50 servings = 1.18 oz. / serving

5. Crediting math is always rounded down to the nearest .25 oz. eq. or 1/8 scoop. Therefore, this recipe is rounded down to credit as 1.0 oz. meat/meat alternate per serving.

How many ounce equivalents of grains does one serving of this recipe provide?

The recipe has 3 lbs. of macaroni.

1. According to the Grain Crediting Chart for Child Nutrition Programs (Group H), 1 ounce of dry noodles = 1 oz. eq. grains
2. Determine the number of ounces in the recipe (16 oz. = 1 lb.)

   3 lbs. x 16 oz. = 48 oz.

3. Determine how many ounces are in one serving

   $$\frac{48\text{oz.}}{50\text{ servings}} = .96\text{oz.}$$

4. .96oz. rounds down to .75 oz. eq. grains per serving.

Weight versus Volume

Weight and volume have differences and are not interchangeable. Ounces (weight) are not the same as fluid ounces (volume measurement). For example, 1 cup of rose petals does not weigh 8 oz. and 8 oz. of rocks does not fill up one cup.

If a recipe states that 2.0 oz. of peanut butter was used to make a sandwich, is that 2.0 oz. by weight, a 2.0 oz. spoodle, or 2.0 tablespoons? The actual serving size, and therefore the crediting is different for all three methods of measuring peanut butter.

Weight–How Heavy Is It?

Use weight measurements for grains and meat/meat alternates. The weight measurements are used to determine how that menu item will credit toward meal pattern requirements. For example, many meat/meat alternates and grains contain other ingredients, binders, or fillers, so you may need a larger serving size by weight to credit 1.0 oz. equivalent. Below are some general tips and examples:

Tips for Weight Measurements	
Measurement:	Measured in pounds, ounces, or grams
Tool to Use:	Food scale, grain crediting chart
Crediting Examples:	Deli ham: 1.3 oz. by weight credits as 1.0 oz. equivalent meat/meat alternate *(crediting of specific products will vary).* Whole grain rich bread: 28 grams by weight credits 1.0 oz. equivalent. grain.
Food Production Record:	The FPR should indicate the serving size in the form it will be served (scoop size, etc.). The recipe should specify that the portion size weighs 3 oz. and what serving utensil will serve 3 oz.
Calculating Total Recipe Yield :	Weigh total amount of pan

Calculating yield and determining portion size using weight

1. Using your scale, tare the pan to reset the display to zero.
2. Place your product in the pan and record the weight.
3. To convert pounds into ounces, multiply by 16 (because there are 16oz. in 1 lb.).
4. Divide the total ounces by the total number of servings.

   Yield (oz.) ÷ # servings = oz. per serving

5. Find the correct serving utensil that will fit this amount.

Volume – How much space does it take up?

Use volume measurements for fruit, vegetables, and fluid milk. Serving utensils labeled in ounces are actually a volume measurement (fluid oz.), which does not correlate to ounces in weight for solid objects such as food. A 4 fluid oz. spoodle of food does not mean the food weighs 4 oz.; it means it takes up the space of 4 fluid oz., or 1/2 cup. Below are some general tips and examples:

Tips for Volume Measurements	
Measurement:	Measured in cups, fluid ounces, or tablespoons
Tools to Use:	Ladles, measuring cups, measuring spoons, spoodles, spoons, scoops
Crediting Examples:	Diced pears: 4 fluid oz. spoodle credits 1/2 cup fruit Green peas: 2 fluid oz. spoodle credits 1/4 cup vegetable
Food Production Record:	Write the number of pieces or serving size by volume for fruits and vegetables, and not what is written on the spoodle. If a spoodle says 2.0 oz., do not write 2.0 oz. as the serving size. This amount will be viewed as 2.0 oz. by weight, which is not necessarily 1/4 cup by volume. Instead, write 2 fl. oz., 1/4 cup, or #16 scoop (all of which are the same volume).
Calculating Total Recipe Yield:	Measure gallons, quarts, or cups, keeping track of total amount

Calculating yield and determining portion size using volume

1. Prepare the recipe.
2. Determine the number of gallons, quarts or cups in the final recipe.
3. Convert to the measuring tool that will be used to serve the menu item (i.e., gallons to cups) to determine the serving size volume. To convert gallons to cups, multiply by 16 because there are 16 cups in one gallon.
4. Divide the total yield in cups by the total number of servings to determine the cups per serving:

   Yield (cups) ÷ # servings = cups per serving

5. Round down to the nearest 1/8 cup. Note: if rounding occurs, it could slightly change the yield. You could end up with slightly more or less than the original yield, so you may have to retry the recipe with slight modifications in ingredients to get the correct crediting. Find the correct serving utensil that will fit this amount.

Resource: The Wisconsin Department of Public Instruction has a 7 minute overview video to help you learn more about weight versus volume.

Standardization Process

Standardizing recipes involves three phases:

1. Verify	2. Evaluate	3. Adjust
• Note any elements missing from the recipe (ingredients, preparation steps, etc.). Check the equipment requirements and note any necessary substitutions. • Prepare a small quantity of the recipe, typically 25 servings. Check ingredient amounts and weigh or measure total yield. Follow the recipe closely using the same serving utensils as indicated to check serving yields. Keep notes during preparation and record any changes required. • Transfer the recipe to your standardized recipe template.	• The first step is informal and includes three decision choices: 1) Product is unacceptable; 2) Product is acceptable, but requires modifications and goes back to phase one; and 3) Product is acceptable and ready to be produced for formal evaluation. • The second step is formal and involves students. Evaluate the final recipe product for acceptable appearance, flavor, product qualities (hot or cold, moist or dry, hard to chew, etc.). • Summarize the results and determine your next step: 1) accept the recipe as is; and 2) modify the recipe until acceptable; 3) reject the recipe.	• When the recipe has been accepted, it will need to be adjusted for quantity production (i.e., 50 servings, 100 servings, etc.). • Adjusting recipes may take several attempts to get everything correct. • Scaling your recipe to fit your needs is a key component to standardization.

Substituting Ingredients

You may need to substitute one ingredient for a different ingredient in a recipe, such as beef crumbles in place of raw ground beef, or one fruit for another fruit. This substitution might happen when a company reformulates a product, product availability changes, student preference changes, or for various other reasons. Before you make the recipe with the substitutions, carefully review the recipe instructions, equipment, serving utensils, crediting, and yield. If you are substituting vegetables, it is helpful to do so within the same vegetable subgroup to keep the crediting the same, which prevents ending up with too few vegetable subgroup servings for the week. The crediting may vary depending on the product you use, for example:

Product	Crediting
USDA commodity beef crumbles with soy protein product (SSP)	1.15 oz. of fully cooked beef crumbles credit as 1 oz. equivalent meat/meat alternate.
USDA commodity frozen beef (85/15)	1.34 oz. portion of 85/15 raw ground beef credits as 1 oz. equivalent meat/meat alternate.

Steps for Adjusting Recipe Yield

Food Production Records provide valuable information, such as how many servings of an entrée or side dish were prepared and served. Regularly reviewing this information will help you know if you are preparing the right amount of food. If you run out of an item before the end of meal service, you may want to increase the quantity of your recipe. If you have several servings left at the end of the meal service, you may want to decrease the quantity of your recipe.

There are a few methods that can be used to adjust a recipe for your desired number of servings if it is not meeting your needs. The factor method for adjusting recipes is the most commonly used method of adjusting by hand, which consists of three basic steps:

Step 1: Determine the "factor" to be used. The factor is a multiplier that will be used to increase or decrease the quantity of ingredients in a recipe. The factor is determined by dividing the desired yield (in number of servings) by the current recipe yield (in number of servings). Note: The factor to decrease a recipe is always less than 1; the factor to increase a recipe is always greater than 1.

Example: if you need to make 250 servings and the current recipe produces 100 servings, divide 250 by 100; the factor is 2.5.

Desired yield (250) ÷ Current yield (100) = Factor (2.5)

Example: if you need to make 50 servings and the current recipe produces 200 servings, divide 50 by 200; the factor is .25.

Desired yield (50) ÷ Current yield (200) = Factor (.25)

Step 2: Convert quantities into usable units. If an ingredient is listed in multiple units (i.e., quarts and cups), convert it to one unit (cups) before doing calculations. Fractions (i.e., 3/4 cup) should be converted to decimals (i.e., .75 cup).

Step 3: Multiply each ingredient quantity by the factor. Ingredient quantities given as fractions need to be converted to decimals before doing this calculation.

Example: 17 lbs. pinto beans (current measure for 100 servings) x 2.5 (factor) = 42.5 lbs. pinto beans (new measure for 250 servings). Also written as 42 lb. 8oz. (note: 16oz = 1 lb.).

Example: 34 lbs. pinto beans (current measure for 200 servings) x .25 (factor) = 8.5 lbs. pinto beans (new measure for 50 servings). Also written as 8 lb. 8oz. (note: 16oz = 1 lb.).

Step 4: Change amounts into common measurements. Sometimes your calculations result in a quantity that is hard to measure or is not commonly used. Rounding to the nearest common measure may be necessary.

Example: 10 tsp. of parsley can be changed to 3 Tbsp. 1 tsp. for easier measuring (note: 3 tsp = 1 Tbsp.).

Example: 1.2 cups of diced onions can be changed to 1-1/4 cup for easier measuring.

Another way to adjust recipes is using computer software. The USDA has approved several nutrient analysis software programs for school foodservice operations; many can perform recipe adjustments. Time and resources will be needed to enter the recipes and train employees, but it can make the process of scaling recipes faster and more accurate.

Testing and evaluating the recipe is your best way to determine appropriate quantities for each ingredient. Some considerations for adjusting recipes include:

- Size of equipment will impact the batch size of a recipe. If your equipment will not fit the scaled up recipe, consider preparing more than one batch.
- Some ingredients may not increase proportionately, including herbs/spices, leavening agents (baking soda, baking powder, yeast), thickening agents (flour, cornstarch, eggs), and liquid (water, juice). The right amounts for these recipe ingredients will need to be determined during recipe testing.
- Factors such as exposed surface area, which can influence evaporation, can change the total amount needed for an ingredient.

Reference: Measuring Success with Standardized Recipes (National Food Service Management Institute)

Standardized Recipe Resources

Recipes

USDA Standardized Recipes for Schools (ICN Child Nutrition Recipe Box)

Recorded Trainings

Recorded training on Standardized Recipes (MDE)–20-minute training that provides an introduction to standardized recipes.

Recorded webinar on the Food Buying Guide (MDE)—58-minute training that provides an overview of the Food Buying Guide and how to use it to determine creditable portions for school meals.

What's the Yield with Standardized Recipes? (Wisconsin Department of Public Instruction)—15-minute training focused on standardized recipes, weight versus volume, how to scale a recipe, and how to credit ingredients using the Food Buying Guide. Learn kitchen math skills and how to determine yield and scoop size.

Documents

Menu Documentation Information (MDE)-including food production records, standardized recipe templates and more.

Menu Planner for School Meals (USDA) –See chapter 4, **Meal Preparation and Documentation** section, for Standardized Recipe information.

Apply your Knowledge

Basics Review

1. **Which of the following need to have a standardized recipe?**

__ Grilled cheese sandwich
__ Chef salad
__ Hamburger on bun
__ Raw carrots

2. **Match the following term with the correct definition:**

Term	Definition
Recipe	A. Has been tested several times in a foodservice operation and resulted in a consistent product each time when the exact procedures are used.
Quantity Recipe	B. Specifies the ingredients, the amounts needed, how to combine them, and other steps to take to prepare the menu item.
Standardized Recipe	C. Any recipe that produces 25 servings or more.

3. **What are the benefits of using standardized recipes in Child Nutrition Programs (check all that apply)?**

__ Consistent Food Quality
__ Predictable Yield
__ Food Cost Control
__ Labor Cost Control
__ Customer Satisfaction
__ Inventory Control
__ Consistent Nutrient Content
__ Efficient Purchasing
__ Employee Confidence
__ All of the Above

4. **Abbreviations:** The following words are often used in a recipe. Write the abbreviations next to the following words in the table below.

a. Edible Portion
b. As Purchased
c. Cup
d. Fluid Ounce
e. Weight
f. Gallon
g. Number
h. Ounce
i. Pint
j. Critical Control Point
k. Pound
l. Quart
m. Tablespoon
n. Teaspoon
o. Package

Answers

1. Grilled cheese sandwich, chef salad, and hamburger on bun
2. Recipe: B; Quantity recipe: C, Standardized recipe: A
3. All of the above
4. a. EP
   b. AP
   c. c or cup
   d. fl. oz.
   e. wt
   f. gal
   g. No. or #
   h. oz.
   i. pt.
   j. CCP
   k. lb. or #
   l. qt.
   m. T or Tbsp.
   n. t or tsp.
   o. pkg.

Take Inventory of Your Recipes

You probably have a wide assortment of recipes that are used in your foodservice operation. Perhaps you are using some of the USDA Standardized Recipes along with some favorites from decades ago. It is good practice to regularly review your recipes and update them as needed. Here are two ways to get started:

Have a discussion with the cooks and servers

Schedule a meeting for the cooks and servers to provide input on their experience making and serving menu items. Have a copy of your menu available to help guide the discussion.

- Are there any menu items we make for which there is not a written recipe?
- Are there recipes that we make that do not yield consistent results? If so, which recipes?
- Are there recipes that we make that have unclear instructions (e.g., which serving utensils to use, exact equipment needed, ingredient descriptions, order of preparation steps, etc.)? If so, which recipes?
- Have any of our ingredients changed recently because of availability, student preference, seasonality etc.? If so, which recipes does that impact?

Inventory of current recipes

Have at least one person be the lead of this activity. Information gathered from your discussion with cooks and servers will be helpful during this process.

Step 1: Compare your menu to your file of recipes. If you are missing any recipes for foods that contain two or more ingredients, make a list of the recipes that need to be written.

Step 2: Go through each recipe, one by one, that you currently use. Answer the following questions and write notes for each recipe so you know the specific areas that need to be updated.

- For recipes that have previously been standardized, such as USDA Standardized Recipes:
    - Are we substituting ingredients that are not included in the original recipe?
    - Is the recipe yield the same as the amount we prepare?
    - Does the serving size accurately reflect the amount we serve to students in each grade group?
    - Are we using the same equipment and serving utensils as the recipe indicates?
- For other recipes:
    - Are the essential elements of a standardized recipe included?
    - Do we follow the recipe exactly as it is written when preparing it?
    - Do we need to increase or decrease the quantity of the recipe based on Food Production Record data?

Step 3: Update your recipes, one by one, according to the notes you have made. The Check your Recipes checklist in this document will help guide this process.

Practice your Math

1. **Converting Ingredient Sizes**
   a. A recipe calls for 1 quart + 2 ¼ cups of pineapple tidbits. How many cups is this equal to? _____

      - Determine how many cups are in one quart
      - Add the additional 2 ¼ cups that are in the recipe

   b. A recipe calls for 3 lbs. 2 oz. cooked chicken. How many ounces is this equal to? _____

      - Determine how many ounces are in one pound. Multiply by three because you have 3 lbs.

         a. Add the additional 2 oz. that are in the recipe.

2. **Recipe Adjustment**

Broccoli Salad Recipe: Determine the amount of each ingredient needed to make 225 servings. First, calculate your factor to go from 100 servings to 225 servings (refer to Steps for Adjusting Recipe Yield in this document for guidance). When converting quantities, fractions should be converted to decimals.

Ingredient	100 servings (recipe amount)	Converted quantities (if appropriate)	Factor	225 Servings (Calculated amount)	225 Servings (Common measure)
Fresh Broccoli	13 lb. 8 oz.			30.375 lb.	
Mayonnaise	2 qt.	2 qt.			4 qt. + 1 pt.
Sugar	2 lb.			4.5 qt.	
White Vinegar	½ cup				1 cup +2 Tbsp.
Milk, low fat	1/3 cup			.759 cup	
Walnuts, chopped	1 qt. 3 ½ cups	7.5 cups			4 qt. + 7/8 cup

3. **Crediting**
   a. The USDA recipe for Orange Rice Pilaf (100 servings) calls for 1 gallon (6 lb. 4 oz.) of brown rice (long-grain regular, dry, parboil). What is the grain crediting for the rice in one serving?

      - Determine the amount of cooked rice that the recipe will yield (cups) according to the Food Buying Guide.
      - Divide the total number of cups (cooked) by the total number of servings.
      - Round down to the nearest ¼ cup.
      - Refer to the Exhibit A: Grain Crediting Chart for Child Nutrition Programs, Group H. What is your serving size equivalent to in ounce equivalents (oz. equivalent)?
        = _____ oz. equivalent grain per serving

   b. Your casserole recipe calls for 7 lbs. of raw ground turkey. The recipe yield is 50 servings. What is the creditable amount of meat/meat alternate?

      - Look in the Food Buying Guide to determine the edible portion of 1 lb. ground turkey.
      - Cross multiply to determine the number of pounds of turkey the cooked recipe will yield based on the Food Buying Guide:

        1 lb. (AP) / ____ lb. (EP) = 7 lbs. / X X = ____lbs.

      - Convert to ounces (16 oz. = 1 lb.):
      - Determine how many ounces are in one serving:
      - Round down to the nearest .25 oz. eq.

        =_____oz. eq meat/meat alternate per serving

Answers

1. a) 6.25 cups of pineapple tidbits
   b) 50 ounces of chicken
2. Broccoli Salad

Ingredient	**100 servings (recipe amount)**	**Converted quantities**	**Factor**	**225 Servings (Calculated amount)**	**225 Servings (Common measure)**
Fresh Broccoli	13 lb. 8 oz.	13.5 lb.	2.25	30.375 lb.	30 lb. 6 oz.
Mayonnaise	2 qt.	2 qt.	2.25	4.5 qt.	4 qt. + 1 pt.
Sugar	2 lb.	2 lb.	2.25	4.5 qt.	4 lb. 8 oz.
White Vinegar	½ cup	.5 cup	2.25	1.125 cups	1 cup +2 Tbsp.
Milk, low fat	1/3 cup	.333 cup	2.25	.759 cup	¾ cup
Walnuts, chopped	1 qt. 3 ½ cups	7.5 cups	2.25	16.875 cups	4 qt. + 7/8 cup

Reference: Measuring Success with Standardized Recipes (National Food Service Management Institute): Practice Exercises for Factor Method of Recipe Adjustment, example 2.

3. a) Orange Rice Pilaf: ½ cup = 1 oz. eq.
   b) The casserole recipe provides 1.5 oz. of meat/meat alternate

Check Your Recipes

Use the checklist below to help review recipes during the standardization process.

Recipe Title and Number: _____

Review Step	*Questions*	*Yes*	*No*	*NA*	*Action Needed*
Recipe Title and Category	Does the recipe title reflect the content?				
	Is the title appealing to customers?				
	Does the recipe have a number and/or category for easy access?				
Ingredients	Are all the ingredient names clear?				
	Are the ingredients listed in the order that they are used?				
	Does each ingredient indicate product type/form (i.e., fresh, canned, frozen, drained, packed in juice, dehydrated etc.)?				
	Does each ingredient indicate pre-preparation technique to be applied to the ingredient (i.e., sliced, chopped, minced, grated) and size if applicable (i.e., ¼ in., ½ in.)?				
Weight/Volume	Is there an accurate volume or weight listed for all ingredients?				
Cooking Temperature and Time	Is the cooking temperature stated on the recipe?				
	Is the cooking time stated on the recipe?				
Instructions and Equipment	Are the instructions written clearly and describe each step to prepare the recipe?				
	Is the pan size indicated?				
	If preparation equipment is needed, is it indicated?				

Review Step	*Questions*	*Yes*	*No*	*NA*	*Action Needed*
	Is the cooking equipment indicated?				
	Is the serving utensil listed?				
Serving Size and Yield	Is serving size stated on the recipe?				
	Is the serving size weight given?				
	Are directions given for how to divide the product into individual servings?				
	Does the recipe provide enough product to meet the contribution to the meal component?				
	Is the recipe yield indicated?				
	Does the recipe state the meal component contribution towards the meal pattern? (Meats/Meat Alternates, Fruit, Vegetable, Grain, Milk)				

Reference: Measuring Success with Standardized Recipes (National Food Service Management Institute) and Checklist for Reviewing Standardized Recipes (Public Schools of North Carolina)